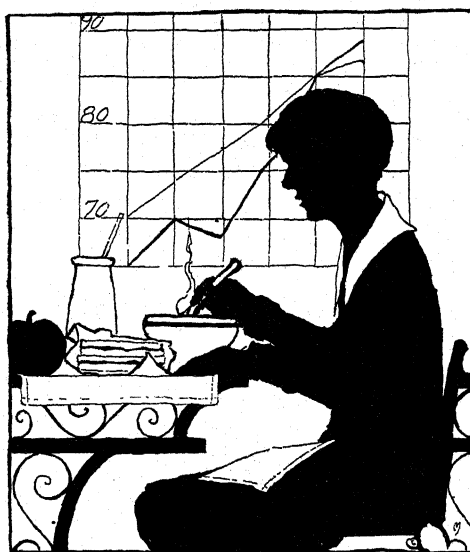


# The School Child's Food



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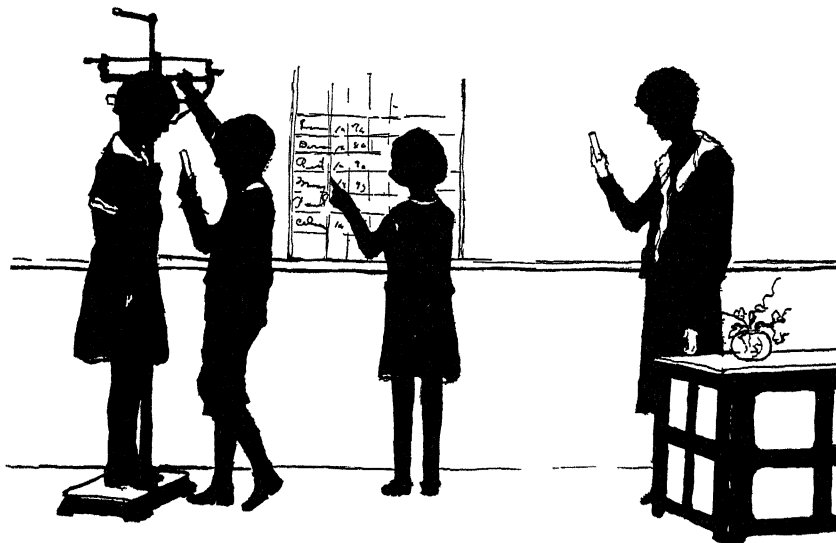
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# The School Child's Food

Parents and community leaders all over Ohio are interested in the development of healthier boys and girls. This bulletin is prepared for the use of the many parents and leaders who are interested in the school child's food. Additional help can be obtained through the county extension office and the home economics teachers in the county.

Food is an important factor, not only in growth but also in the maintenance of a healthy body. Every day during the school year, which ranges from 180 to 200 days a year, thousands of boys



Boys and Girls Watch Their Gains

and girls are taking approximately one-third of the day's food at school. This fact gives importance to the lunch. Many of these school children are suffering from malnutrition. This does not always mean insufficient food. Malnutrition many times is due to unwise selection of food, and to conditions under which the food is eaten. Eating hurriedly or at irregular intervals prevents the good digestion and absorption which are necessary if the greatest benefit is to be derived from the food eaten. Malnutrition may also be due to poor health habits or to disease and defects.

Physiologists and nutrition workers have found that a satisfactory lunch helps greatly to reduce the number of poorly nour-

ished children. With improvement in physical condition there is usually an improvement in school work. Recent studies would indicate that there is a definite relationship between nutrition and progress in school, and that a poorly nourished child is an economic loss to any community.

The picture of the well nourished child shows:

- A happy and satisfied disposition
- An active and not easily tired body
- A healthy color
- Bright eyes
- Sound teeth
- Firm skin and muscles
- Full chest and abdomen held up and in
- Straight knees
- An active and alert mind

Contrast the above with a picture of the poorly nourished child with:

- Irritable and unstable nerves
- A restless and easily tired body
- Pallor
- A serious, drawn look about the eyes
- Loose skin and flabby muscles
- Winged shoulder blades
- Protruding abdomen
- Flexed knees
- Mind sometimes over-alert but more often dull and slow

These above characteristics are found in varying degrees in school boys and girls.

This bulletin will be confined to a discussion of the food needs of the school child, the entire lunch brought from home, and the packed lunch from home supplemented with one hot dish. Many large schools have facilities for serving a whole lunch, either plate lunch or foods selected in a cafeteria. Most help can be given these schools if they are dealt with individually, as their equipment and problems are quite varied. Suggestive menus for the entire lunch, with quantity recipes, may be had on request from the Home Economics Extension Office at the Ohio State University.

#### FOOD NEEDS OF THE GROWING CHILD

Food in sufficient quantity must be eaten. Many children eat too little, due to lack of appetite. Other children are too interested in playing to stop to eat. The child must have food to provide materials needed for growth. By growth is meant the building of muscles, bones, teeth, blood, and other body tissues. In addition,

there should be sufficient food to provide energy for work and play and to carry on the life processes, such as respiration, circulation, digestion, and assimilation. Food should be of such quantity and amount that it helps to maintain the body in a state of health.

#### VARIETY IN THE CHILD'S DIET ESSENTIAL TO HEALTH

Every day the food of the school child should include selections from each of the following groups of foods: (1) milk; (2) eggs, fish, meat or chicken, or a substitute; (3) bread, cereals, and other grain products; (4) vegetables; (5) fruits; (6) fat in small amounts may be used; (7) sweets in small amounts may be included. Suggestions on the use of these foods in the diet, and the approximate amounts needed daily, are given in the following paragraphs:



Milk for Every Boy and Girl

*Milk.*—This is the most important food for growing children. No other food can take its place. As a source of lime milk cannot be excelled. Its protein is excellent. The fat is in a finely divided form readily digested. Milk is also a good source of vitamins A and B. Milk is often called a protective food, as it helps to offset deficiencies in diet. To provide a quart of whole milk each day for everyone during the growing period (1 to 18 years) is a safe rule. This amount can be

taken in food and drink.

*Eggs, Fish, Chicken or Meat, or their Equivalents.*—Where plenty of milk and eggs each day are included in the child's diet, very little meat need be given before the seventh year. Two ounces of meat daily for a child from 7 to 10 years, and three ounces daily from 10 to 14 years, is probably sufficient.

*Bread, and other Grain Products.*—These furnish from one-third to two-thirds of the school child's food. Cereals and flours of the whole grain contain minerals, vitamins, and fiber not contained in the refined cereals and flours. Alternated with refined cereals, the whole grain cereals add variety and interest to the child's food.

Cereals should be thoroughly cooked to develop flavor. They may be cooked directly over the fire, but for long cooking it is safer to use a double boiler or a fireless cooker. Milk may be substituted

for water. Cereals cooked in milk should be cooked in a double boiler. The use of milk increases the food value, improves the flavor, and is an important means of increasing the amount of milk.

*Vegetables.*—Vegetables possess many excellent qualities that make them an essential part of the diet. There is little danger of eating too much of vegetables in a well-chosen diet. Often an unsatisfied appetite after a meal has been eaten means the lack of sufficient vegetables in the meals, and children who crave more food find their appetites satisfied when vegetables are given regularly. As a source of important minerals and vitamins vegetables are foremost. Those green or yellow in color supply vitamin A, while they all contribute in varying amounts vitamins B and C. These vitamins are necessary to the maintenance of growth and health.

Their indigestible fiber makes vegetables helpful in correcting and guarding against constipation, an all too common ailment. Valuable vegetables, besides potatoes, are peas, beans, spinach, onions, string beans, squash, cauliflower, asparagus, carrots, celery, tomatoes, parsnips, oyster plant, turnips, and all kinds of greens, such as: beet tops, turnip tops, dandelions, swiss chard and lettuce.

When fresh vegetables are not available, dried or canned vegetables may be used. Potatoes—baked, boiled or mashed—should be given practically every day. A variety of vegetables in soups and stews with just enough meat for flavor make hot dishes which are satisfactory and inexpensive. Meat is used chiefly for flavor in such dishes. To prevent loss of important minerals and vitamins, vegetables, except potatoes, should be cooked in as short a time as possible. Any liquid remaining should be served with the vegetables or used in another dish.

*Fruits.*—There should be fruit in the diet at least once every day. Where fresh fruit is not available, use dried fruit or canned fruit. Fresh fruit should be thoroughly ripe but not decomposed. Fruits should be served, using the least amount of sugar to make them palatable.

*Fat.*—Fat is essential for growing children. Milk fat (cream and butter) is an important kind. Children should, if possible, have whole milk. If the cream is removed from their milk, they should have plenty of butter. Rich pastries or fried foods should not be given to children.

*Sweets.*—There is great danger of children getting too much sugar. It dulls the appetite and interferes with digestion. Sugar

is less likely to be used to excess when taken only in simple puddings, custards, fresh fruits, vegetables, or in dried fruits, such as prunes, raisins, dates, or figs. The child who has some of these foods daily will probably have his need and desire for sweets satisfied. Whatever sweets are given should be at the end of a meal, never between meals or at the beginning of a meal.

#### THE LUNCH AT SCHOOL

The food needs for boys and girls are the same whether all three meals are eaten at home or the noon meal is taken at school. It is true that the contents of the lunch carried are determined by foods that can be packed satisfactorily. The one responsible for the packing of the lunch, whether it is the entire lunch or foods to supplement a hot dish which is served at the school, needs to keep in mind the food needs of school boys and girls.

To stimulate appetite and keep the child interested in food there should not only be variety in the foods of the lunch, but also variety from day to day. Something crisp which requires chewing adds zest to the lunch. An occasional "surprise" is enjoyed by most boys and girls. Many mothers find this is a good way to give the boys and girls new dishes.

Wherever a hot dish can be served, the foods to supplement it are brought from home. This simplifies the work of packing the lunch at home. The well-selected and well-prepared hot dish acts as a stimulus to appetite and promotes digestion.

#### THE SCHOOL LUNCH MAY TEACH GOOD HABITS

The school lunch should be made the means of teaching good food habits. Boys and girls often learn to eat foods not eaten before. Sitting down together long enough to eat lunch in an orderly fashion fosters a spirit of cooperation and social contact. It may be made the means of practicing the art of conversation and good table manners. By taking an active part in preparing and serving the hot dish, the children learn to assume responsibility for both home and school tasks; and the "breaking of bread" together gives the teacher splendid opportunity to teach habits of cleanliness, proper habits of eating, and good table manners.

By the time the boy or girl enters school a complete set of food habits has been formed. The eating of sufficient food of the right kind and amount daily at regular times should be established as a permanent habit. The child may well consider the eating of three meals a day an important business. Worthy motives should

always be given for the eating of important foods. A good example set by the other members of the family and those with whom the child comes in contact has an important influence in establishing good habits.

Most boys and girls like approval and enjoy doing what the group does, so the school lunch offers an excellent opportunity to establish good food habits by popularizing the practice of good food habits.

A food habits score which takes account of important food habits may be had from Ohio State University Extension Service, or the County Extension Agent's office. Teachers may secure them in quantity for their pupils, or parents may secure them for members of their families.

Lunch work may easily open the way for discussion of food and food habits, health, care of teeth, and relation between weight and height, and thus carry into the home, to be put into immediate practice, important rules governing growth and health. Teachers report that the results of the lunch work have more than repaid them for the added responsibility.

Teachers report that where there is a good lunch with a hot dish, there is less discipline necessary, and there are fewer absences from school.

No school lunch can succeed without cooperation of all concerned, the pupils, the teachers, school authorities, and the parents.

#### WHAT CAN GO INTO THE PACKED LUNCH

*Sandwiches.*—Sandwiches are generally liked, easily carried, and capable of much variation. A sandwich made of thick, carelessly buttered slices of bread with a piece of fried fat pork or sausage between is not appetizing. Use bread at least twenty-four hours old, evenly sliced, not more than  $\frac{1}{4}$  inch thick, and carefully spread to the very edge with softened butter (an easy way to soften hard butter is to cream it with a fork). The knife for cutting bread should be sharp.

Plain bread and butter sandwiches in the lunch supplement the other food often better than filled sandwiches. To keep sandwiches fresh that are to be carried wrap them in oiled paper. A coating of butter on both slices of bread prevents sogginess when a moist filling is used. Fillings should be well seasoned but not highly seasoned. As sandwiches are being made, it is a good plan to cut them into convenient pieces for eating, rather than to leave them to be broken as eaten.



*Fillings for Meat and Meat-like Sandwiches are:*

Meat or chicken—several thin slices, sliced across the grain of the meat, are easier to eat in a sandwich than a thick slice of meat. Meat that cannot be sliced may be chopped or ground, seasoned and moistened with cream, salad dressing, or catsup.

Hard cooked eggs may be sliced and put between slices of buttered bread or they may be chopped and moistened with cream and salad dressing. To the chopped eggs may be added chopped celery, ground raw carrot, chopped olives, or ground nuts.

Cottage cheese, well seasoned and moistened, makes a delicious sandwich filling, and can be varied by the addition of chopped peanuts, blanched almonds, ground raw carrot, or chopped celery.

Cream cheese, because of its compact and soft texture, should be grated or ground and mixed with some other food which requires chewing, as finely cut celery or ground raw carrot.

Peanut butter is a favorite with many boys and girls. If used plain, it is rather flat in flavor and has a tendency to roll up in the mouth. This can be overcome by blending it with sweet milk until of the consistency of soft butter, then adding salt to taste; spread on lightly buttered slices of bread. Another way is to take equal amounts of peanut butter and catsup or chili sauce and blend with enough milk to make soft, and season with salt.

Other fillings are:

Equal parts cottage cheese, and ground carrots moistened with salad dressing.

Crisp bacon crushed and spread on bread.

A layer of whole pecan halves on buttered slices of bread and salted lightly.

When no other sweet is used in the lunch, a second kind of sandwich, a sweet one, may be added. This may be raisin bread, orange bread, or nut bread buttered, and a sweet filling, such as jelly, jam, fruit butter, conserve, or honey may be used. A good fruit mixture for a sandwich filling is made by grinding dried fruits, adding chopped nuts, if desired, and moistening with lemon juice or fruit juice. Such a filling as this can be kept on hand in a jar, if stored in a cool place.

*Fruit is always appetizing and carries well.* Juicy fruits are especially good with sandwiches which are likely to be dry. Raw fruits carry well, and cooked or canned fruit can easily be carried in a small jar with tight fitting cover.



A Crisp Raw Vegetable Adds Interest

*Vegetables for the Packed Lunch.* Nothing adds more zest to the packed lunch than a crisp raw vegetable. With a little planning this is possible at any season of the year. Most of the foods in a lunch are likely to be soft and something succulent to chew adds variety.

The raw vegetables should be crisp, and may be kept that way by wrapping tightly in oiled paper. This also prevents passing on the flavor to the other foods of the lunch.

Some suggestions for raw vegetables, varying with the time of year, are:

- Strips of crisp raw carrot
- A few leaves of crisp lettuce, cabbage or spinach
- Strips of winter radish
- Sections or slices of raw turnips
- Celery
- Raw tomatoes
- Canned tomatoes may be carried in a small jar with tight fitting cover

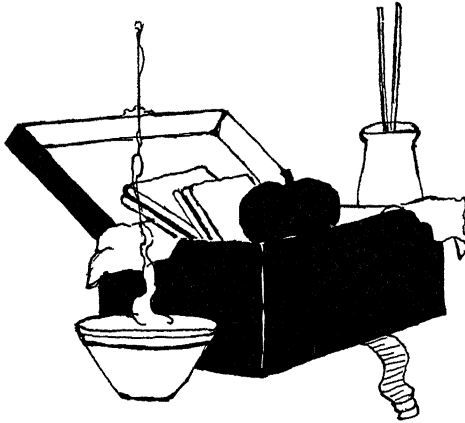
*Milk* in some form, at least a cupful, should always be included in the lunch to help make up the quart a day each boy and girl should have. Without milk a lunch is likely to contain too much starch and too much sweet. Probably the least tiring, as well as the easiest way to take milk, is to drink it. This means that the milk must be kept cold until lunch time. On cold days a milk soup, cocoa not too sweet or strong with cocoa, or postum made with milk, add a warm food which aids the digestion of the rest of the lunch. Other ways of using milk are in cup custards and similar desserts, and in cottage cheese.



Milk in Every Lunch

A *sweet* of some kind is appreciated and enjoyed to "top off" the lunch. The sweet may be a sweet sandwich, some crisp cookies, gingerbread or plain cake, fruit or fruit confection, a simple dessert, a piece or two of candy or sweet chocolate, or a few dates.

#### PACKING THE LUNCH



One Hot Dish with the Packed Lunch

White paper napkins and oiled paper are inexpensive and helpful to wrap foods to keep them in good condition and to prevent exchange of food flavors.

A small jar with tight fitting cover is needed. Small size wax paper boxes can be purchased for a small sum. These are much lighter in weight than the glass jars and have the advantage of being unbreakable, and may be discarded when emptied.

A lunch box or basket is not necessary. If a tin box or pail is used, it should have several holes punched near the top for ventilation. Every day it should be washed, scalded, and aired. Many boys and girls prefer to carry a paper package rather than a lunch box.

A drinking cup, knife, fork, and spoon should also be provided for each boy and girl.

If possible, the lunch should be packed so that foods to be eaten first are on the top.

Each packed lunch should contain a napkin to wipe soiled fingers and keep crumbs off the floor. There should also be a square of white oilcloth, a small towel, or a napkin to cover the desk before the lunch is opened. This serves as a "table-



Off to School with a Well Selected Lunch

cloth" and the lunch will be enjoyed more if set out properly before eating.

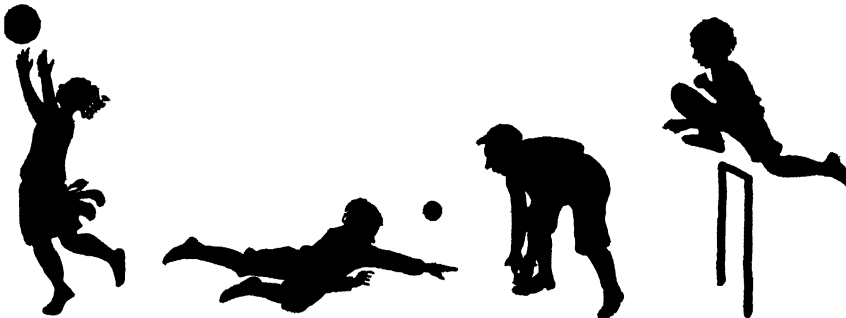
The following is offered to show how variety may be planned for when the entire lunch has to be packed at home.

#### ENTIRE PACKED LUNCHES

Cottage cheese sandwiches (rye or whole wheat bread)	Orange or apple
Raisin and nut sandwiches	Plain cake
Raw carrots (cut in strips)	Milk or cocoa
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Ground meat or meat loaf sandwiches	Custard or rice pudding
Jam or jelly sandwiches (whole wheat bread)	Milk or cocoa
Celery (three or four stalks)	
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Brown bread sandwiches	Apple sauce or other stewed fruit
Peanut butter sandwiches	Oatmeal cookies
Strips of crisp cabbage	Milk or cocoa
Hard cooked egg or cup of cottage cheese	
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Ground carrot and raisin sandwiches	Gingerbread
Cinnamon roll or raisin bread sandwich	Cup of canned tomatoes or tomato juice
Raw apple	Milk or cocoa
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#### OMIT IN PACKED LUNCHES

Fried or greasy foods  
 Foods that become soggy or crushed, such as fruit pie  
 Most pickles and relishes, as they are too strongly acid and too highly seasoned  
 An excess of sweet foods, such as cakes heavily iced, preserves, etc.  
 Strong flavors and excess of seasoning  
 Coffee and tea, as they are stimulants and should not be given to growing boys and girls



## SUGGESTIONS REGARDING THE HOT DISH

### *Equipment and Supplies for the Hot Dish:*

A supply of water is of first importance.

A closed cupboard is required for storing cooking utensils, serving dishes, and staple supplies, which must be kept away from dust and pests. (See illustration on page 14.)

A table for working space is needed. This may be a large packing box with the top painted or covered with linoleum.



Boys Help with the Cooking

A three- or four-burner stove is required. The number of burners depends upon the number served. The stove, which is the most expensive piece of equipment, is often loaned by an interested mother.

Utensils should be large enough on the bottom to cover the burner, and large enough to hold the required number of servings. If granite utensils are used, care must be taken not to crack the enamel by rough handling or sudden change of temperature.

For each child the minimum of equipment to eat the hot dish is a teaspoon and a large cup or bowl. The coffee mugs used in restaurants are inexpensive, of

good size, and easily carried by small children on account of the handle and depth of the cup. If children bring teaspoon and cup from home, they should be left at school and washed there, rather than taken home.

A dish drainer for the china is a great saving of towels, time, and energy and is inexpensive. Where there is no sink, a large pan is needed to fit the dish drainer. Spoons, cutlery, and glass must be wiped.

### *List of Equipment for Serving Twenty-four:*

Cupboard with door or curtain (may be made from packing boxes)	Draining pan
Oilcloth or linoleum covered table	2 kettles with handles or bails (6 qt.) and covers for same
Stove (oil or gas)	2 asbestos mats
Oil can for oil stove	Containers with covers for supplies
Water pail	1 wash pan
Garbage pail with cover	1 dish drainer
Wash basin	Strainer with coarse mesh
Pitcher, 4 to 6 quarts	Saucepan, 2 or 3 quart
Double boiler (6 quart)	2 plates
Dish pan	2 tablespoons

(Continued on next page)

2 teaspoons	Pint ladle
2 paring knives	Vegetable brush
Case knife	Can opener
Large stirring spoon (wooden)	Paper napkins
Steel fork	12 dish cloths
Measuring cup ( $\frac{1}{2}$ pint)	12 dish towels
Quart measure	Paper hand towels
Butcher knife	

If funds are available, the following articles could be added:

Tea kettle	Wooden mixing spoon
Serving tray	Food grinder
Spatula	Egg beater
Large fork	Boards on which to set hot dishes
Potato masher	Knife sharpener



A Cupboard for Supplies Is Needed

*Food Supplies.*—Food supplies are obtained in a number of ways:

**Purchased by a Committee.**—This plan causes least trouble, but can be used only where parents are able and willing to pay in cash for the hot dish. Supplies that are non-perishable can be purchased in quantity and money saved, provided there is good storage space.

**Brought from Home.**—Often families that cannot afford a cash outlay for the hot dishes can contribute food supplies which are credited as cash.

**Combination of Purchased and Brought from Home.**—Part of the supplies are purchased and the remainder brought by pupils.

**Donated.**—Local organizations or parents often assume, for a period of time, the responsibility for the hot dish and may donate all or part of the supplies.

*Who Participates.*—Every boy and girl who carries a cold lunch should have the hot dish. Those who cannot pay may perform some service in return for this food. They should not be made to feel they are objects of charity.

*Cost.*—The hot dish should not cost more than 5 or 6 cents per serving. Many schools charge 5 cents each day rather than to charge different prices on different days. Cost of food should cover cost of service and operating cost, if not provided otherwise.

*Planning the Food.*—If there is a home demonstration agent, a home economics teacher, or a home economics trained woman in the vicinity, she will be glad to help plan the hot dishes so there will be variety from day to day and the hot dish will really be a supplement to the food brought from home.

*How the Work Is Done.*—Whenever possible someone, other than teacher and pupils, should come in and do the cooking. In most communities someone can be found who will do this for a moderate sum. This cost may be added to the cost of food, or some local organization, such as Parent-Teacher Association, may assume the responsibility.

A committee of boys and girls may assist the cook and help with serving, clearing away, and cleaning up. The following committees are usually found helpful:



A Steaming Hot Dish on a Cold Day

1. *Committee on Preparation*—The number on this committee depends on the number of pupils and whether or not there is a cook. A group of four can prepare food for twenty-four. It is a good plan not to have an entirely new committee each week. One or two of the members may be retained for a second week to work with the new members on the following duties:
  - a. Decide (with the assistance of the teacher or the school lunch committee of mothers) upon the menu of hot dishes to be served for one week. Post the list and the names of the committee so that all the children may read them and give the information to their parents.
  - b. Arrange for the supplies.
  - c. Prepare hot dish, or arrange for the food prepared at home to be reheated at school.
  - d. See that the prepared dish is hot at time of serving.
  - e. Taste the food before serving to be sure that it is palatable. Use a spoon for tasting and do not dip the tasting spoon into the food.

2. *Committee on Serving*—Two pupils will be needed for the serving of 24. This committee may be changed weekly and have the following duties:
  - a. Set out the individual dishes for serving.
  - b. Place napkin on desk and place spoon or fork at the right.
  - c. Serve the hot dish.
3. *Committee on Cleaning*—Two pupils will be needed for each twenty-four pupils. This committee may be changed weekly and have following duties:
  - a. Provide hot water for dishwashing.
  - b. Collect used dishes and utensils, or have each pupil return his soiled dishes to a convenient place.
  - c. Wash dishes.
4. *Committee on Accounts*—Two pupils will be needed.
  - a. Keep accounts of funds received and paid out.
  - b. Pay bills.
  - c. Balance accounts each week.

*Points Emphasized at Lunch Hour:*

Room thoroughly aired before lunch hour.  
Hands washed before and after eating lunch.  
Desk clean; with oilcloth protection and with paper or cloth  
Napkin, bowl or cup, spoon, and lunch box at desk  
Each child is served in order or each child goes in turn to be served.

The following rules should be observed:

Eat lunch slowly, with pleasant conversation.  
Keep lips together when food is being chewed or is in the mouth.  
Eat foods in order, with dessert last.  
Sit erect and keep arms off the desk or table.  
Wait until companions have finished lunch before leaving desk.  
Clean desks carefully.  
Put room in order.  
Wash hands



Boys and Girls Wash Their Hands Before and After Eating



*Suggestions for Dish Washing:*

Scrape and stack dishes.

Wash in clean hot soap suds.

Dip in boiling water and stack in drainer to dry, or stack in drainer and pour boiling water over the inside and the outside of the dishes and allow to drain.

Spoons and cooking utensils should be dried with a clean towel.

Each time that towels are used, they should be washed in hot soap suds and rinsed in clean water.

All towels and dish cloths should be boiled and washed once a week.

SUGGESTIONS FOR PACKED LUNCHES TO BE USED WITH ONE HOT DISH

<i>Hot Dish</i>	<i>Brought From Home</i>
Cream of pea soup or other vegetable soup	Whole wheat bread sandwich Raisin and nut sandwiches Raw carrot strips Apple Sponge cake, cookies, or plain cake
Cream of tomato soup or corn chowder	Bread and butter sandwiches Meat and egg sandwich Strips of raw cabbage Fruit confection or stewed fruit
Escalloped tomatoes	Meat sandwiches Brown bread and butter sandwiches Celery Fruit and graham crackers Milk
Cocoa	Boston brown bread A cup of canned tomatoes Jelly or jam sandwich Cup of cottage cheese Apple sauce or other stewed fruit
Cream of potato soup or creamed vegetable	Peanut butter sandwiches Stewed figs or other stewed or canned fruit Cookies or plain cake
Scrambled eggs or creamed eggs	Cup of milk Raisin bread and butter Celery or bacon sandwiches Ground raw carrots and peanut sandwiches Molasses cookies or plain cake

TABLE OF MEASUREMENTS

3 teaspoons = 1 tablespoon	2 tablespoons sugar = 1 ounce
16 tablespoons = 1 cup	2 tablespoons butter = 1 ounce
2 cups = 1 pint	2 cups sugar = 1 pound
2 pints = 1 quart	2 cups solid fat = 1 pound
	3½-4 cups sifted flour = 1 pound

## RECIPES

The amounts given in the following recipes are sufficient for 24 servings.

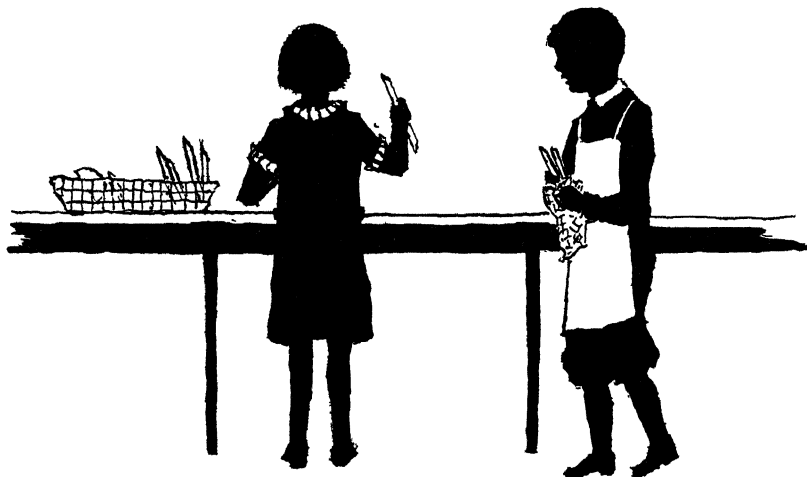
### WHITE SAUCE

This white sauce may be used as the basis for all milk soups and medium white sauce for creamed vegetables.

Kind	Liquid	Butter	Flour	Uses
Thin .....	1 cup	1 tablespoon	1 tablespoon	Soups
Medium .....	1 cup	1 tablespoon	2 tablespoons	Creamed Dishes

#### *Methods of Combining:*

1. Melt the butter in a saucepan and when bubbling add flour and stir until smooth. Remove from fire and add milk, stirring constantly. Cook for 5 minutes.



Boys as Well as Girls Help with the Work

If a large quantity of white sauce is made, it is better to scald the milk before combining with butter and flour. In order to avoid a lumpy mass, thin the blended butter and flour with a small amount of cold milk which has been reserved, then follow with the scalded milk. In most cases this method is to be preferred, as it gives a white sauce of good flavor, because the starch in the flour is well cooked when combined with the butter over the flame.

2. Cream the butter with the dry ingredients. Add the hot milk gradually, stirring to keep the mixture smooth. Cook 5 minutes, stirring while it thickens.

3. Mix the dry ingredients and blend with enough cold milk to pour easily. Have the rest of the milk hot and add the mixture to it gradually, stirring constantly until thickened. Cook 5 minutes. Stir in the butter. The amount of butter may be decreased or omitted, when the sauce is made by this method.

## GENERAL DIRECTIONS FOR MAKING CREAM SOUPS

Prepare the fresh vegetables by paring and slicing or dicing. Cook until tender in sufficient water to keep the vegetables from sticking. When the vegetables are tender, drain the liquid into a bowl and mash the vegetables through a sieve. Canned vegetables should be cooked a few minutes, using the liquid in the can and adding water if necessary.

While the vegetables are cooking, make the white sauce. Substitute the liquid in which the vegetables were cooked for an equal amount of the milk called for in the recipe. Add vegetable pulp and seasonings to white sauce and heat the combined mixture.

### CREAM SOUPS—AMOUNTS GIVEN ARE FOR 24 SERVINGS

Kind	Amount of Vegetables	Liquid	Flour	Butter	Seasoning
POTATO	12 to 15 potatoes or 4 to 5 pounds. (3 medium-sized potatoes weigh 1 pound)	5 quarts milk, including the water in which the potatoes were cooked	$\frac{3}{4}$ cup	1 cup or less	3 tablespoons salt $\frac{1}{2}$ teaspoon pepper Onion Celery
PEA	3 quarts, canned or fresh	5 quarts milk, including liquid on peas	$\frac{3}{4}$ cup	1 cup or less	2 tablespoons salt $\frac{1}{2}$ teaspoon pepper
CORN	2 $\frac{1}{2}$ quarts or 10 cups	5 quarts milk, including liquid on corn	$\frac{3}{4}$ cup	1 cup or less	2 tablespoons salt $\frac{1}{2}$ teaspoon pepper Onion
CARROT	12 medium-sized carrots (carrots average 3 to lb.)	5 quarts milk, including liquid in which carrots were cooked	1 cup	1 cup or less	3 tablespoons salt $\frac{1}{2}$ teaspoon pepper Onion
CELERY	5 stalks (One medium-sized stalk will give two cups of celery cut in pieces)	5 quarts milk, including liquid in which celery was cooked	1 cup	1 cup or less	3 tablespoons salt. $\frac{1}{2}$ teaspoon pepper Onion

Other vegetable combinations may be made, following the general rule of equal amounts of thin white sauce and cooked vegetables. Dried peas and beans may be used in place of fresh vegetables.

Combination of two or more vegetables makes a pleasing variety.

### CREAM OF PEA AND TOMATO SOUP

4 c. canned peas and liquor

4 qts. milk

$\frac{1}{2}$  c. butter

4 c. canned tomatoes

$\frac{1}{2}$  t. soda

2 T. salt

Heat the peas in their own liquor and press through a coarse sieve or

colander. Make a white sauce of the flour, butter, and milk. Heat the tomatoes and press through the coarse sieve or colander; add the soda to tomatoes. Combine pea pulp and white sauce and reheat. When hot, add tomatoes and reheat, but do not allow to boil. Serve immediately.

#### BEAN SOUP

1 pt. navy beans	5 qts. milk
2 qts. water	Salt to taste after cooking
$\frac{1}{2}$ c. butter	beans with the ham
1 lb. smoked ham, ground	

Wash the beans; cover with water and soak overnight. Cook until tender in the water in which they were soaked, adding the ground ham. Rub through coarse sieve or colander. Add milk, season to taste and serve hot.

*Variations:* One cup diced onions and one quart of cooked tomatoes may be added in place of one quart of milk. Add  $\frac{1}{2}$  teaspoon soda to tomatoes.

#### SPINACH AND ONION SOUP

4 slices bacon	2 T. salt
2 c. sliced onion	$\frac{3}{4}$ c. fat (bacon or butter)
1 qt. canned spinach	$\frac{3}{4}$ c. flour
5 qts. milk	

Dice bacon and brown. Pour off fat. To the bacon add spinach and onion, and simmer until onion is cooked (10 to 15 minutes). Rub spinach through a coarse sieve or colander. Make a white sauce of the fat, flour, and milk. Add the spinach pulp and onion. Serve hot. A few cubes of toasted bread in each soup dish gives a good flavor to this soup.

#### VEGETABLE SOUP

1 c. diced carrot	$\frac{1}{4}$ c. barley or rice
1 c. diced onion	1 $\frac{1}{2}$ lbs. flank or brisket of
2 c. diced potato	beef, ground with coarse
1 c. diced turnip	blade of grinder
1 c. finely cut cabbage	$\frac{1}{2}$ c. chopped parsley, if de-
1 c. canned corn or peas	sired
3 c. canned tomatoes	5 qts. cold water

Add cold water to the beef and soak one-half hour. Heat slowly to the simmering point and add barley or rice. Simmer but do not boil. Add vegetables when meat and barley are almost half cooked. Serve as soon as vegetables are tender. If parsley is used, add just before serving.

#### POTATO AND SALSIFY SOUP

2 lbs. salsify (scraped and	1 c. butter
sliced)	$\frac{3}{4}$ c. flour
2 lbs. potatoes (peeled and	2 T. salt
diced)	2 T. chopped parsley (if de-
1 $\frac{1}{2}$ qts. water or stock	sired)
5 qts. hot milk	

Cook potatoes and salsify in the water or stock until soft. Cover and allow to simmer but not boil; mash when tender. Make a white sauce of the flour,

butter, and milk. Add the vegetable pulp and liquor, and reheat. Add parsley and serve.

#### CREAM OF TOMATO SOUP

9 c. tomatoes	$\frac{1}{2}$ c. butter
1 t. soda	$4\frac{1}{2}$ qts. milk
1 c. flour	2 T. salt

Cook tomatoes until soft enough to strain. Strain, add soda. Make white sauce and combine mixtures. Serve immediately.

#### CORN CHOWDER

3 cans corn, No. 2	$\frac{1}{4}$ t. pepper
3 qts. potatoes	2 qts. boiling water
$\frac{1}{4}$ lb. salt pork	1 c. coarse cracker crumbs
3 onions, sliced	$3\frac{1}{2}$ qts. scalding milk
2 T. salt	$\frac{1}{2}$ c. butter

Try out the pork and brown the onion in the fat. Cut potatoes into thin slices, and add to onions; add boiling water and cook until potatoes are tender. Add corn and milk and bring to boiling point. Add seasoning and crackers. Serve immediately.

#### CORN CHOWDER WITH TOMATOES

Substitute 1 quart canned tomatoes for 1 quart of milk in above recipe. Heat and strain the tomatoes and add  $\frac{1}{2}$  teaspoon soda. Reheat, but do not boil.

#### ESCALLOPED TOMATOES

12 c. canned tomatoes	$\frac{1}{2}$ minced onion, if desired
1 c. melted butter	$1\frac{1}{2}$ T. salt
6 c. stale bread crumbs	

Mix the bread crumbs and melted butter. Save enough crumbs to cover the baking dish. Mix the remaining buttered crumbs, tomatoes, and seasonings; put in baking dish, cover with buttered crumbs and bake about 45 minutes, or until the mixture is heated through and the crumbs are brown.

#### CREAMED VEGETABLES

Use 1 cup of white sauce for 3 cups of cooked vegetables, and plan to serve at least  $\frac{2}{3}$  cup of the creamed vegetables to each child. For 24 children there should be 16 cups of creamed vegetables made by adding 4 cups of white sauce to 12 cups of cooked vegetables. Cook vegetables in least amount of boiling salted water. Drain and add hot white sauce.

The following vegetables are suggested: potato, carrot, onion, string beans, peas, parsnips, turnip, and celery. A combination of carrots with peas or string beans gives variety.

#### CREAMED EGGS

8 c. milk	2 t. salt
1 c. butter	24 hard cooked eggs
1 c. flour	

Make white sauce, following the general directions for making white sauce on page 18. Cut the eggs into quarters or chop into small pieces. Add to white sauce, reheat.

#### COCOA

4 qts. milk	$\frac{1}{2}$ t. salt
1 qt. water	$\frac{3}{4}$ c. cocoa
1 c. sugar	

Place the milk in a kettle and scald, but do not boil. Mix cocoa, sugar, and salt together and add boiling water. Boil for 5 minutes. Add this to the scalded milk and serve.

Brands of cocoa vary in strength of flavor, therefore the amount used should be varied accordingly. Only enough cocoa to flavor the milk should be used.

#### COCOA PASTE

A recipe for cocoa paste is given for those who prefer to make cocoa by adding just enough of the cocoa paste to hot milk to give it the flavor. The cocoa paste may also be added to cold milk.

3 c. cocoa	$\frac{1}{2}$ t. salt
3 c. sugar	6 c. water

Mix cocoa, salt and sugar. Add water and cook to a smooth paste. By cooking in a double boiler (about one hour) a better flavor is obtained.

On page 23 is shown height and weight tables for boys and girls. The standard or average weight for a child is found where the horizontal column opposite the height crosses the vertical column under the age. Illustration—The standard weight for a girl 50 inches high and nine years old is 58 pounds.

Children should be weighed and measured without shoes and in only the usual indoor clothes; boys should remove their coats.

Measurements for heights should be taken with the children standing with feet close together and close against the measuring line; or for school use, a measuring tape may be tacked on the wall and a book placed on the child's head edgewise, to mark his height.

Only scales with bar and weights should be purchased for school use. Spring scales with dial face are not very durable and are likely to get out of order soon.

WEIGHT—HEIGHT—AGE TABLE FOR GIRLS OF SCHOOL AGE

Height Inches	5 Yrs	6 Yrs	7 Yrs	8 Yrs	9 Yrs	10 Yrs	11 Yrs	12 Yrs	13 Yrs	14 Yrs	15 Yrs	16 Yrs	17 Yrs	18 Yrs	19 Yrs
38	33	33													
39	34	34													
40	36	36	36												
41	37	37	37												
42	39	39	39												
43	41	41	41	41											
44	42	42	42	42											
45	45	45	45	45	45										
46	47	47	47	48	48										
47	49	50	50	50	50	50									
48	52	52	52	52	52	53	53								
49	54	54	55	55	55	56	56								
50	56	56	57	58	59	61	61	62							
51	59	59	60	61	61	63	63	65							
52	63	63	64	64	64	65	65	67							
53	66	66	67	67	67	68	68	69	71						
54	69	69	70	70	70	71	71	73							
55	72	72	74	74	74	75	75	77	78						
56	76	76	78	78	78	79	81	83							
57	80	80	82	82	82	84	85	88	92						
58	84	84	86	86	86	88	89	93	96	101					
59	87	87	90	90	90	92	95	100	103	108	104				
60	91	91	95	95	95	97	101	105	108	109	111				
61	99	99	100	101	105	105	108	112	113	116	118				
62	104	104	105	106	109	113	115	117	119	120	122	111			
63	110	110	112	112	116	117	119	120	122	123	125	126			
64	114	114	115	117	119	120	122	123	125	126	128	130			
65	118	118	120	121	122	123	125	126	128	130	133	135			
66	124	124	125	129	129	132	133	135	138	140	142	144			
67	128	128	130	131	133	135	138	140	142	144	146	148			
68	131	131	133	135	138	140	142	144	146	148	150	152			
69	135	135	137	138	140	142	144	146	148	150	152	154			
70	136	136	138	140	142	144	146	148	150	152	154	156			
71	138	138	140	142	144	146	148	150	152	154	156	158			
Average annual gain (lbs.)															
Short.....	4	4	4	5	6	6	10	13	10	7	2	1			
Medium.....	5	5	6	7	8	10	13	10	6	4	3	1			
Tall.....	6	8	8	9	11	13	9	8	4	4	1	1			

WEIGHT—HEIGHT—AGE TABLE FOR BOYS OF SCHOOL AGE

Height Inches	5 Yrs	6 Yrs	7 Yrs	8 Yrs	9 Yrs	10 Yrs	11 Yrs	12 Yrs	13 Yrs	14 Yrs	15 Yrs	16 Yrs	17 Yrs	18 Yrs	19 Yrs
38	34	34													
39	35	35													
40	36	36													
41	38	38	38												
42	39	39	39	39											
43	41	41	41	41											
44	44	44	44	44											
45	46	46	46	46	46										
46	47	48	48	48	48										
47	49	50	50	50	50	50									
48	52	53	53	53	53	53									
49	55	55	55	55	55	55	55								
50	57	58	58	58	58	58	58	58							
51	61	61	61	61	61	61	61	61							
52	63	64	64	64	64	64	64	64	64						
53	66	66	67	67	67	67	67	68	68						
54	70	70	70	70	70	70	71	71	71	72					
55	72	72	72	72	72	72	73	73	74	74					
56	75	76	77	77	77	77	78	78	78	80					
57	79	80	81	81	81	81	82	83	83	83					
58	83	84	84	85	85	85	86	86	86	87					
59	87	88	89	89	89	89	90	90	90	90	90				
60	91	92	92	93	94	94	95	95	96	96					
61	95	95	96	97	99	100	103	103	103	103	106				
62	100	101	102	103	104	107	108	110	111	111	116	116			
63	105	106	107	108	110	113	113	115	117	117	121	123	127		
64	109	111	113	115	117	121	122	127	131	131	136	139	142		
65	114	117	118	120	122	127	127	131	136	136	141	143	147		
66	119	122	125	128	132	136	139	142	146	146	151	154	159		
67	124	128	130	134	138	143	146	149	152	152	157	160	165		
68	131	134	137	141	145	150	154	158	162	162	167	170	171		
69	137	139	143	146	149	152	155	158	161	161	166	169	172		
70	143	144	148	151	154	157	160	163	166	166	171	174	177		
71	148	150	151	152	154	157	160	163	166	166	171	174	177		
72	153	155	156	158	161	164	167	170	173	173	178	181	184		
73	157	159	160	162	165	168	171	174	177	177	182	185	188		
74	160	164	168	170	171	174	177	180	183	183	188	191	194		
Average annual gain (lbs.)															
Short.....	3	4	5	5	5	5	4	8	9	11	14	13	7	3	
Medium.....	4	5	6	6	6	6	7	9	11	15	11	8	4	3	
Tall.....	5	7	7	7	7	7	8	12	16	11	9	7	3	4	

The age is taken at the nearest birthday. Tables by Bird T. Baldwin, State University of Iowa, and Thomas D. Wood, Columbia University.